

INWARDLY FOLDING ROLLATOR WITH AN UPWARDLY PIVOTABLE SEAT

The invention relates generally to wheeled ambulatory supports,
5 and more particularly to a rollator having a molded rigid seat to allow the
user to rest in a stationary position but which can be pivoted upward out
of the way of the user. Further, the side frame members can be folded
inwardly in order to conserve storage space.

BACKGROUND OF THE INVENTION

Certain health conditions hinder vertical balance, and movement in
the upright position or other mechanics of walking. The health care
industry has developed aids for those who suffer from such conditions,
15 including crutches, walkers, rollators, and wheelchairs. Rollators are
wheeled supports which aid individuals who have function in their lower
limbs, but lack the muscular control, strength or balance to enable them
to walk unassisted. It is advantageous for such supports to include two
pairs of wheels in order to avoid the need to lift the device, and to
20 facilitate its use as an ambulatory aid. Further, these devices may
include a seat so that a user may use the device to sit and rest.

Traditional walkers or rollators have a frame that forms a U-
shaped enclosure about the user. The enclosure is open to the back and
25 the user walks toward the closed front portion of the frame while using
the lateral side armrests for support. Walkers typically do not include a
seat, although rollators may include a seat. If a rollator includes a seat,
the user turns to face the open side and sits facing the opposite
direction from the orientation when the support is in active ambulatory
30 use.

SUMMARY OF THE INVENTION

The rollator of the present invention has a frame comprised of
opposing side frames linked by a front brace. The side frames each
35 include tubular front and back leg members, each carried on a wheel,

and joined at the top by an integral horizontal lateral support. Each lateral support generally includes an armrest and brake means. For each side frame, a cross bar extends between the front and back legs to support the construct, and to provide a mounting bar for the seat which is pivotably mounted to the front legs on a pair of mounting brackets which offset the axis of rotation forward of the front legs. This arrangement allows the seat to be flipped upward to open the space in the walker and such that the seat is out of the way of the user. The rear of the seat has integrally molded bracket members that are curved to minimize interference with the user and with the inwardly folding brake handles.

The frame also includes a front brace that has a bushing member on either side to rotatably hold the front legs of each of the side frame members. The legs include spring loaded locking members that cooperative with a locking recess in an annular catch plate to secure the side frames in the open position. The locking members can be released by pressing a lock handle and unlock the detent from the catch plate and to allow the side frames to be folded inward when the seat is in the upright position. The length of the front and back legs can be adjusted through a connection to telescoping length adjusting sleeves which are sure by snap buttons. This feature allows a simultaneous adjustment of the height of the seat, and of the armrests. The seat is preferably a contoured rigid, molded seat that includes a means to attach it to a pivot bracket on each side having a forward offset pivot axis. The brackets are carried on each of the front legs. The rear of the seat includes on each side a curved integral molded support bracket with a catching groove that hugs the cross bar to support the rear of the seat. The references to the location of the components, such as front and back, are in reference to the device when the user is facing the front brace in an upright walking position.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a front elevation of the rollator in an open position in accordance with the present invention; and

Figure 2 is a front elevation of the rollator shown in Figure 1 with the seat in the upright position; and

Figure 3 is a rear elevation of the rollator shown in Figure 1 with the seat in the upright position; and

Figure 4 is a front elevation of the rollator shown in Figure 1 with the rollator folded inwardly.

DETAILED DESCRIPTION OF THE INVENTION

The wheeled ambulatory support, or rollator of the present invention has a foldable frame 10 having a pair of generally U-shaped vertical side frames 12, 13 which are typically of a hollow tubular steel construction. The side frames 12, 13 each include a front leg 14, 15 and a back leg 16, 17. These front and back legs are each supported at the bottom by a wheel and at the top have an integral transverse horizontal support member 18, 19. These supports are positioned to carry armrests 20 upon which the user leans during ambulation. The supports 18, 19 also include a brake handle 21 which is used to activate a braking mechanism, typically connected by a cable to a brake shoe 24 which acts on the rear wheels 22. The rollator may also include an additional parking brake (not shown).

The front legs 14, 15 are each supported by offset castor forks 26 having a sleeve 30 that receives the bottom of the front leg and further having a front wheel 32. The back legs simply have an axle 34 of a wheel 35 that engages a bore in the rear leg to support the rear leg. A telescoping sleeve member 40 having spaced openings 41 receives a top portion 49 of the rear leg in a sliding cooperation and a spring biased

pop detent or snap button snaps into place in the openings 41 to adjust the height of the rear leg. There is a corresponding mechanism for the front leg.

The side frames 12, 13 also each include a cross bar 42, 43 which have a bracket at either end 44, 45 and 46, 47 to secure the cross bar generally perpendicular to the front legs and the rear legs respectively. The cross bars form a support for the rearward-facing portion of the seat member 50. The seat member is a rigid molded plastic seat which may be contoured with a rear depression and forward pommel (i.e. relative to the seat) for comfort and that has integral downward curving rear brackets 52 that include u-shaped recesses 54 that form a frictional fit on the cross bar. The recesses are popped off of the cross bars to allow the seat to be folded upward about the front pivot brackets 56 that are mounted on either side of the front legs. The pivot brackets extend forward of the front legs so as to offset the axis of rotation forward of the front legs, e.g., by the depth of the seat. This puts the seat out of the way of the user when it is in the upright position. Additional support is provided by support flanges 57 that extend inwardly from the side frames and engages and support the bottom of the seat. The brackets 52 are curved to avoid interference with the brake handles 21 during folding.

The frame also includes a front brace 60 which comprises a curved tubular member having transverse bushings on either side 62, 63. The curve allows the seat to nest in front of the front brace 60 when the seat is upright. The front legs 14, 15 extend through and can rotate in the bushings to permit the side frames to be collapsed inward. Each side frame also includes a locking mechanism 70 that comprises an annular catch plate 72 having a lock hole that is engaged by a spring biased détente. A handle 75 is used to disengage the lock means 74. A flexible back support 80 which can be made from a suitable fabric strip which is riveted to itself also extends between the side frames.

While in accordance with the patent statutes the best mode and preferred embodiment have been set forth, the scope of the invention is not limited thereto, but rather by the scope of the attached claims.

Patent Office